



The opossum can survive in an urban area — or almost any area — because it has such an omnivorous diet.

## Toothy 'possum survives in city

By Timothy Nowicki  
special writer

### nature

MOST ANIMALS in southeast Michigan are nocturnal — that is, active during the night. And since most of us are sleeping at this time, we have few chances to see animals that inhabit urban areas.

An opossum is one of those nocturnal animals that has been able to survive in an urban area.

While sitting down for breakfast the other day, I happened to notice an opossum waddle across the yard toward our house. His light gray coat contrasted brightly against the green grass illuminated by the diffused light caused by rain clouds overhead.

He did not look like a large individual. Some opossum may weigh 12 pounds. His long pointed snout reminded me that an opossum has the dubious distinction of having the most teeth of any Michigan mammal — 50.

ALL THOSE TEETH are used in feeding on a diet of varied items, such as berries, nuts, small mammals, insects and, in urban areas, garbage. It is this omnivorous diet that enables an opossum to survive in a number of habitats.

Several thousand years ago, opossum diverged from populations of their now distant relatives, the kangaroo. From South America they gradually moved north and now inhabit most of North America.

Michigan's first written record of an opossum was by Cadillac, the founder of Detroit, at the beginning of the 18th century. Since then, they have been seen throughout the southern half of Michigan.

Only within the last 40 years did the opossum expand its range into the Upper Peninsula.

## Youth Corps aids museums

In its fourth year of operation, the Michigan Youth Corps is expected to provide 12,500 jobs to 18- to 21-year-old men and women this summer, according to Gov. James J. Blanchard.

The projects range from mosquito control to historic renovation and growing food for the poor. Most jobs last six to eight weeks and give the workers a chance to earn about \$1,000 at \$3.35 an hour.

In Oakland County, a crew will renovate a local farm built in 1869 and donated to Waterford Township to be used as a museum.

In Greenfield Village, 10 Youth Corps members will serve as guides and help with grounds maintenance. Workers in Trenton and the Southgate Regional Center, in Southgate, will serve as aides.

Applications for Youth Corps jobs are still available at all MESC offices and at many employment and training offices, career centers, colleges and community colleges.

## County needs rec equipment

Oakland County is seeking donations of recreational equipment for a Children's Village shelter for abused and neglected children.

Persons with equipment donations may call recreation specialist Greg Alessi, 858-1135.

An athletic complex is being planned to include two softball diamonds, a cinder running track, soccer and football fields.

Needed are arts and crafts kits, badminton equipment, baseball gloves, bases, bicycles, boxing equipment, cue sticks, croquet sets, equipment bags, fishing rods, Frisbees, golf equipment, gym mats, hockey sticks, horseshoes, ice skates, model cars and planes, table tennis equipment, pool tables, tents and camping accessories, weightlifting equipment and wrestling mats.

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WITH A FRIEND

## Humans, gorillas, chimps WSU scientist says they are genetically similar

When you call your brother-in-law a gorilla or refer to the neighborhood kids as chimps, you aren't far off.

Renowned evolutionist Morris Goodman of Wayne State University has collected firm evidence that gorillas, chimpanzees and humans are less than 2 percent different genetically.

The three species may have branched off of the evolutionary tree almost simultaneously.

Goodman was one of a handful of speakers in the American Association for the Advancement of Science conference on "The Creation-Evolution Controversy: 1986 Update" in Philadelphia.

Goodman of Oak Park described the conference as the AAAS's answer to the recent resurgence in the movement to teach creationism (the belief that the world and everything in it was created in seven days) in school science classes.

"WE THINK creationism should maybe be taught in a philosophy course, but definitely not in a science course," he said. He feels his evidence alone puts an undeniable hole in the theory of creationism.

Goodman began studying genetic differences between gorillas, humans and chimpanzees to determine how closely the three were linked.

The data that he and his graduate and post-doctoral students have gathered so far shows that the three are closer than ever before believed.

"We can define with fairly precise figures the exact genome (genetic) divergence in the higher primates," Goodman explained. "Presently, we have found a 1.7 percent difference between humans and chimpanzees and with orangutans, about twice that value."

As recently as 30 years ago, scientists believed gorillas and chimpanzees were much more closely related than were humans and gorillas or humans and chimpanzees. Goodman said that belief was at least partly egotistical.

"They placed far too much weight on intelligence being a factor," he said.

THE WAYNE State biology, anthropology and anatomy professor studies evolution by looking at the building blocks of genetic material, the DNA nucleotides. Nucleotides encode the amino acids that make up protein chains.

To determine the degree of genetic divergence between the two species, he compares nucleotide sequences that descended from a common ancestor. The smaller the percentage of nucleotides in different positions, the smaller the

genetic divergence.

"We have sequenced 18,000 (human, gorilla and chimpanzee) nucleotides so far — more than 6,000 aligned nucleotide pairs — and the differences seen support the three-way evolutionary split of the species," Goodman said.

He added that such detailed genetic information may also help in the medical field.

"It should identify sequences involved in gene expression and provide clues on how some genetic dysfunctions could be treated," he said.

Goodman was the first to demonstrate that not only are the two African apes (chimpanzees and gorillas) and humans closer in genetic kinship to one another than to Asian apes (orangutans and gibbons) and other species, but that the two African ape species are each about as close to humans as to the other.

GOODMAN'S career as a molecular evolutionist began in a lab at the University of Wisconsin.

While doing his post-doctoral work at California Institute of Technology, Goodman said, "I thought it would be fun to compare humans to animals and look at the molecular differences."

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